

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4	"6806268".pn.	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 16:44
L2	176	((advance or advanced) adj2 (glycosylation or glycosylated) adj2 (end adj product))	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 16:49
L3	21	I2 and (ophthalmic or glaucoma)	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 16:53
L4	59	cross-linking adj inhibition	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 16:53
L5	118488	cross-linking	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 16:54
L6	2043	I5 and glaucoma	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 16:53
L7	22	I2 and (intraocular)	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 18:51
L8	5177	I5 and intraocular	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 16:55
L9	28	I8 and sugar-derived	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 17:10
L10	1881	cerami	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 17:10
L11	0	I10 and thiazolijm	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 17:10
L12	48	I10 and thiazolium	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 17:12
L13	33	I12 and (conjunction or combination)	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 17:12
L14	4	improving adj ocular adj accomodation	US-PGPUB; USPAT; DERWENT	OR	OFF	2007/10/14 18:51



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☐ 1: Exp Eye Res. 1999 Mar;68(3):361-6.

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FULL-TEXT ARTICLE

Relationship between autofluorescence and advanced glycation end products in diabetic lenses.

Abiko T, Abiko A, Ishiko S, Takeda M, Horiuchi S, Yoshida A.

Department of Ophthalmology, Asahikawa Medical College, 4-5 Nishikagura, Asahikawa, 078-8510, Japan.

Autofluorescence and advanced glycation end product (AGE) levels were measured in the lenses of 9 diabetic Chinese hamsters and 6 age-matched controls. Lens autofluorescence also was measured in 37 diabetic patients and 14 age-matched controls. Lens autofluorescence values were measured noninvasively with a lens measurement system using color filters with peak transmission at 365- and 434-nm wavelengths (excitation and emission, respectively) that are characteristic of AGE fluorescence. The peak lens autofluorescence level was used as the lens autofluorescence value, and the mean lens autofluorescence values from both eyes of each subject were used for statistical analysis. The AGE levels in one lens from each hamster were measured by noncompetitive enzyme-linked immunosorbent assay with a polyclonal anti-AGE antibody. We found a 2.2 times increase of the mean lens autofluorescence value of diabetic hamsters in comparison with that of controls ($P < 0.01$). We also found a 1.5 times increase of the mean AGE level from the lenses of diabetic hamsters in comparison with that of controls ($P < 0.01$). Moreover, a statistically significant positive correlation between the AGE level and autofluorescence value in the same lenses was observed in all hamsters ($\rho = 0.58$, $P < 0.05$). In human subjects, we found a 1.4 times increase of the mean lens autofluorescence value of diabetic patients in comparison with that of age-matched controls ($P < 0.01$). Our results suggest that non invasive measurement of lens autofluorescence may be a guide to AGE levels in lenses. Copyright 1999 Academic Press.

PMID: 10079144 [PubMed - indexed for MEDLINE]

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1: Diabetes Care. 2001 Mar;24(3):479-82.

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Diabetes Care

Corneal advanced glycation end products increase in patients with proliferative diabetic retinopathy.

Sato E, Mori F, Igarashi S, Abiko T, Takeda M, Ishiko S, Yoshida A.

Department of Ophthalmology, Asahikawa Medical College, Hokkaido, Japan.

OBJECTIVE: To evaluate corneal advanced glycation end product (AGE) fluorescence in patients with diabetes and in healthy control subjects. **RESEARCH DESIGN AND METHODS:** Corneal autofluorescence was measured in 26 eyes of 26 patients with type 2 diabetes (mean age 57.0 years; mean disease duration 12.2 years; mean HbA1c 7.1%) and 13 eyes of 13 healthy age-matched control subjects (mean age 57.9 years). The patients with type 2 diabetes were divided into the following groups: patients without diabetic retinopathy (DR), patients without proliferative diabetic retinopathy (PDR), and patients with PDR. Corneal autofluorescence was measured by fluorophotometry with the wavelength that is characteristic of AGE fluorescence (excitation and emission 360-370 nm and 430-450 nm, respectively). We defined peak corneal autofluorescence levels as corneal AGE fluorescence values. We compared the corneal AGE fluorescence values in the four groups. **RESULTS:** In the PDR group (11.9 +/- 3.9 arbitrary units [mean +/- SD]), the corneal AGE fluorescence values were significantly higher compared with the control subjects (6.9 +/- 1.3 arbitrary units), the patients without DR (7.4 +/- 2.1 arbitrary units), and the patients without PDR (6.9 +/- 2.2 arbitrary units) ($P < 0.05$). **CONCLUSIONS:** We found that corneal AGEs may increase in patients with diabetes and PDR compared with control subjects, patients without DR, and patients without PDR. In the patients with PDR, increased corneal AGEs may play a role in diabetic keratopathy.

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